

February 19, 2013



U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 15741

EXPIRATION DATE: November 30, 2014

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Pacific Consolidated Industries, LLC
Riverside, CA
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation of oxidizing gases by cargo aircraft without a strong outer packaging capable of passing the Flame Penetration Resistance Test, the Thermal Resistance Test, and to waive marking the outer package. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the transportation in commerce.
 - c. No party status will be granted to this special permit.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.400 in that the package labeling requirements are waived, § 173.302(f)(3), (4), (5) in that the requirement for passing the Flame Penetration and Thermal Resistance Tests are waived, and § 175.501(e)(3) in that the requirement for a strong outer packaging is waived.

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5. BASIS: This special permit is based on the application of Pacific Consolidated Industries, LLC dated October 15, 2012 and additional information dated January 17, 2012, submitted in accordance with § 107.105 and the public proceeding thereon.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identi- fication Number	Packing Group
Oxygen, compressed	2.2	UN1072	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Prescribed packaging is a fully wrapped carbon-fiber reinforced brass lined cylinder made in conformance with the Basic Requirements for Fully Wrapped Carbon-Fiber Reinforced Aluminum Lined Cylinders (DOT-CFFC Fifth Revision, dated March 2007) except as follows:

CFFC-1 *Scope* - Throughout the document replace all references to aluminum alloy liner to a brass liner.

CFFC-2 *Type, Size, and Service Pressure* - The maximum volume must not exceed 3.1 cubic feet with a diameter less than or equal to 20 inches. The marked service pressure must not exceed 3,000 psig at a reference temperature of 21.1°C (70°F).

Galvanic corrosion will be prevented by coating the liner with a thin layer of epoxy prior to wrapping with carbon fiber.

CFFC-6 *Authorized Material and Identification of Liner Materials*:

(a) - The liner must be a seamless cylinder made of SAE CA-620 brass or 11000 copper plate.

(i) * * * *

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(ii) The material compositions of the brass and copper must be within the limits prescribed herein:

If brass is used, the material composition must be within the limits prescribed herein:

<u>Element</u>	<u>Min %</u>	<u>Max %</u>
Copper	68	72
Zinc	28	32
Other	-	0.5

If copper is used, the material composition must be within the limits prescribed herein:

<u>Element</u>	<u>Min %</u>	<u>Max %</u>
Copper	99.8	-
Oxygen	-	0.05
Other		0.2

(iii) * * * *

(iv) * * * *

(v) The brass liner must not be heat treated

(vi) The limits for the mechanical properties of the brass or copper liner shall be as follows:

Yield strength	38,000 - 50,000 psi
Tensile strength	40,000 - 70,000 psi
Elongation (2" gauge)	25% min

(b) Filament materials

(i) Carbon fiber

Tensile strength	710,000 psi minimum
Tensile modulus	32,000,000 - 36,000,000 psi

(ii) Glass fiber - Only type E glass fibers are authorized.

b. LABELING - The labeling requirements of § 172.400 are waived.

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c. OPERATIONAL CONTROLS -

- (1) Transportation of the cylinder, oxygen service, by aircraft is only authorized when in accordance with § 175.501.
- (2) Cylinders must be packaged in accordance with § 173.301(a) (9) .
- (3) For Military Aircraft Only the outer packaging requirements of §§ 173.302(f) (3-5) and 175.501(e) (3) are waived. The cylinder transported in this manner must be overpacked in the Mobile Oxygen Storage Tank (MOST) cases described in the application for modification of the special permit.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modification or change is made to the package and it is reoffered for transportation in conformance with this special permit and the HMR.

b. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

9. MODES OF TRANSPORTATION AUTHORIZED: Cargo aircraft and passenger-carrying aircraft.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each aircraft used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

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- o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—"The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Dr. Magdy El-Sibaie
Associate Administrator for Hazardous Materials Safety

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Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: BMOORE